

CLAIMS RENUMBERED TO CORRECT ERROR ~~X~~ 5/27/05

U. S. Patent Application No. 10/031,876  
Amendment Dated May 18, 2005  
Reply to Office Action Dated February 18, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Claims 1-2 (Cancelled without prejudice or disclaimer).

3. (Currently Amended) A foil leak detection chamber comprising two frames connected together in an articulated manner, foils which are mounted on said frames, a test chamber composed of the foils, a seal arranged between the frames, and at least one bore hole in at least one of the two frames, said at least one bore hole adapted to be connected to an inlet of a vacuum pump, wherein an edge zone is provided in which a vacuum can be created independently of said test chamber and into which said bore hole opens out, ~~and~~ wherein one of said frames is equipped with an inner circumferential protrusion, ~~where the~~ and wherein a circumferential rim of said protrusion ~~is in contact with a related foil and~~ is so positioned that the said two foils touch each other when said frames rest on each other.

4. (Previously Amended) The chamber according to claim 3, wherein said protrusion comprises a contoured unitary component joined to one of said frames.

**13**

Claims 5-~~14~~ (Cancelled without prejudice or disclaimer).

~~14~~ ~~15~~ <sup>14</sup> (New) A method for using a foil leak detection chamber having first and second frames connected in an articulated manner and foils mounted to each of the frames, said method comprising the steps of:

(A) providing a seal system for said detection chamber, the seal system defining two independently evacuable areas of said detection chamber, the independently evacuable areas being (i) a test chamber, and (ii) an edge zone, wherein said providing step includes the step of providing a circumferential protrusion on one of said first and second frames, said circumferential protrusion being so positioned that said foils contact each other when said first and second frames are moved together;

- (B) placing an article in said test chamber;
- (C) moving said first and second frames together so that said foils touch each other;
- (D) evacuating said edge zone so that a holding force between said frames is sufficient to eliminate a need to apply an outside holding force to hold said frames together; and
- (E) evacuating said test chamber to test for leaks in said article.

**14**  
**15** ~~16~~ (New) The method of claim ~~15~~, wherein said circumferential protrusion comprises a contoured unitary component joined to one of said frames.

**14**  
**16** ~~17~~ (New) The method of claim ~~15~~, wherein said foil leak detection chamber includes a handle provided at one of said first and second frames.

**14**  
**17** ~~18~~ (New) The method of claim ~~15~~, wherein said providing step includes the step of retrofitting said protrusion on foil leak detect chamber previously devoid of said protrusion.

**18** ~~19~~ (New) A foil leak detection apparatus comprising:

- (A) upper and bottom frames connected together in an articulated manner;
- (B) a protrusion extending from said upper frame;
- (C) a first foil mounted on said upper frame;
- (D) a second foil mounted on said bottom frame, wherein said second foil and said first foil define a test chamber; and
- (E) a bore hole formed in at least one of said first and second frames;
- (F) wherein said protrusion is so positioned that said first and second foils touch each other when said upper frame is lowered onto said bottom frame.

**18**  
**19** ~~20~~ (New) The foil leak detection apparatus of claim ~~19~~, wherein said protrusion comprises a contoured unitary component.

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**20** ~~21~~. (New) The foil leak detection apparatus of claim <sup>18</sup>~~19~~, wherein said protrusion is a circumferential protrusion.

**21** ~~22~~. (New) The foil leak detection apparatus of claim <sup>18</sup>~~19~~, wherein said apparatus includes a handle provided at said upper frame.

**22** ~~23~~. (New) The foil leak detection apparatus of claim <sup>18</sup>~~19~~, wherein said apparatus includes a single sealing ring between said upper and bottom frames.